

3.7 ENVIRONMENTAL JUSTICE

This section addresses the potential for the proposed action and alternatives to create disproportionate impacts on minority and low-income populations. The Public Involvement Program (PIP) for the LCR MSCP provides opportunities for members of the low-income and minority communities that could be affected by the proposed action to participate in the LCR MSCP planning efforts. These efforts are described in section 7.2.

In 1994, the president issued Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority and Low-income Populations. The objectives of the EO include developing Federal agency implementation strategies, identifying minority and low-income populations where proposed Federal actions could have disproportionately high and adverse human health and environmental impacts, and encouraging the participation of minority and low-income populations in the NEPA process.

Minority populations include all persons identified by the Census of Population and Housing to be of Hispanic or Latino origin, regardless of race, as well as non-Hispanic persons who are Black or African American, American Indian and Alaska Native, Asian, Native Hawaiian and Other Pacific Islander.

Low-income populations are those that fall within the annual statistical poverty thresholds from the Bureau of the Census "Current Population Reports, Series P-60 on Income and Poverty." For the purposes of this analysis, low-income populations are defined as persons living below the poverty level (\$17,463 for a family of four with two children in 2000, adjusted based on household size and number of children), as reported by the Census (2000). The Census Bureau uses a set of money income thresholds that vary by family size and composition to detect who is poor. If the total income for a family or unrelated individual falls below the relevant poverty threshold, then the family or unrelated individual is classified as being "below the poverty level." The percentage of low-income persons is calculated as the percentage of all persons for whom the Bureau of the Census determines poverty status, which is generally a slightly lower number than the total population since it excludes institutionalized persons, persons in military group quarters and in college dormitories, and unrelated individuals under 15 years old.

3.7.1 Affected Environment

The planning area and the off-site locations are located within a large geographic region encompassing all or portions of seven counties, including portions of three California counties, portions of three counties in Arizona, and a portion of Clark County, Nevada. Two types of data must be reviewed to evaluate environmental justice effects: minority populations and income levels. Information on population, demographic characteristics, and income for the seven counties in 2000 is provided in Table 3.7-1 below.

Of the seven counties, Imperial County has the largest percentage of minority residents and the highest percentage of the population living below the poverty level, at approximately 80 percent and 23 percent, respectively. Mohave County has the lowest percentage of minority residents and the smallest percentage of the population living below the poverty level, at

approximately 16 percent and 14 percent respectively. The other four counties have minority and poverty populations falling within the range identified for these two counties.

Table 3.7-1. Total Population, Minority Population and Population Living Below Poverty in the Affected Counties, 2000

<i>County</i>	<i>Total Population</i>	<i>Minority Population</i>	<i>Percent Minority</i>	<i>Population Living Below Poverty Level</i>	<i>Percent of Population Living Below Poverty Level</i>
La Paz, AZ	19,715	7,154	36.3	3,798	19.6
Mohave, AZ	155,032	24,745	16.0	21,252	13.9
Yuma, AZ	160,026	88,896	55.6	29,670	19.2
Imperial, CA	142,361	113,872	80.0	29,681	22.6
Riverside, CA	1,545,387	758,069	49.1	214,084	14.2
San Bernardino, CA	1,709,434	960,210	56.2	263,412	15.8
Clark, NV	1,375,765	548,423	39.9	145,855	10.8
Total	5,107,720	2,501,369	49.0	707,752	13.9

Portions of the area potentially affected by the proposed action and alternatives also consist of tribal lands associated with the Fort Mojave Indian Reservation; CRIT; and the Chemehuevi, Quechan (Fort Yuma Indian Reservation), Hualapai, Havasupai, and Cocopah Indian Tribes. Figure 1.1-1 identifies the locations of tribal lands.

Population and income data also were collected for the four specific areas within the counties that could be directly affected by construction related to the project: the LCR planning area, and the three off-site conservation areas located along the Muddy and Virgin rivers, Bill Williams River, and lower Gila River (see Table 3.7-2).

Table 3.7-2. Total Population, Minority Population and Population Living Below the Poverty Level in the LCR Planning Area and Off-Site Locations, 2000

<i>Affected Environment</i>	<i>Counties Included</i>	<i>Total Population</i>	<i>Minority Population</i>	<i>Percent Minority</i>	<i>Population Living Below Poverty Level</i>	<i>Percent Population Living Below Poverty Level</i>
Planning Area	La Paz, Mohave, Yuma, Imperial, Riverside, San Bernardino, Clark	105,756	60,491	57.2	22,330	21.1
Muddy and Virgin Rivers	Clark	4,656	567	12.2	353	7.6
Bill Williams River	La Paz, Mohave	713	86	12.1	77	10.8
Lower Gila River	Yuma	2,576	1,108	43.0	464	18.1
<i>Source: U.S. Department of Commerce, Census Bureau 2000.</i>						

Based on a GIS analysis of the census block groups within each of these four areas, and assuming that populations are equally distributed within a particular census block group, populations were prorated for subsections within block groups. The total population, minority population, and persons living below poverty level were then estimated for each area. It is noted that communities located in proximity to these four areas (e.g., Blythe, Bullhead City, Parker, Needles, and Wellton) could also be affected by the proposed action; however, it would be speculative in this programmatic analysis to attempt to identify which specific locations would be affected. Additional evaluation would be performed once specific projects were identified. Projects located on tribal lands also might require additional analysis. In addition, because workers may travel some distance to agricultural sites for work, the demographic and economic characteristics of the four areas discussed below are provided as general indicators only and are not intended to suggest that persons residing outside of these areas could not be affected.

3.7.1.1 Lower Colorado River

The planning area is the largest and most populated of the four areas considered, with a year 2000 population of approximately 105,756. Of this total, approximately 57 percent of the population is minority, and approximately 21 percent of the population lives below the poverty level. Compared to the three off-site locations, this area has a substantially higher percentage of both minorities and persons living below the poverty level.

3.7.1.2 Muddy River/Moapa Valley and Virgin River

The Muddy River/Moapa Valley and Virgin River off-site conservation area is located entirely within Clark County. The year 2000 population was approximately 4,656. Of this total, approximately 12 percent of the population is minority, and approximately 8 percent of the population lives below the poverty level.

3.7.1.3 Bill Williams River

The Bill Williams River off-site conservation area is located within La Paz and Mohave counties. The year 2000 population was approximately 713. Of this total, approximately 12 percent of the population is minority, and approximately 11 percent of the population lives below the poverty level.

3.7.1.4 Lower Gila River

The lower Gila River off-site conservation area is located entirely within Yuma County. It had a year 2000 population of approximately 2,576. Of this total, approximately 43 percent of the population is minority, and approximately 18 percent of the population lives below the poverty level.

3.7.2 Environmental Consequences

Significance Criteria

The analysis of environmental justice impacts is required by EO 12898 and must be evaluated in NEPA documents. NEPA does not require the use of significance criteria. This analysis

considers whether the impacts of the proposed action and alternatives would disproportionately affect minority or low-income populations.

3.7.2.1 *Alternative 1: Proposed Conservation Plan*

Methodology

The air quality, hazards (increased vectors), noise, and socioeconomic analyses in Chapter 3 were reviewed to determine whether they identified impacts to human populations and are used as the basis for the environmental justice analysis. To provide data for a determination of disproportionate impacts, the demographics of the planning area were compared to the combined demographics of the seven counties containing the planning area, referred to as the Community of Comparison (or COC) (see Tables 3.7-1 and 3.7-2). Likewise, the demographics of each of the three off-site areas were compared to the county or counties (the COC) containing each off-site area. The likelihood of agricultural jobs to be held by minority and low income workers also was considered.

Impacts

The increase in riparian and backwater areas could result in an increase in vectors. Vectors, such as mosquitoes, are attracted to pools of water, such as ponds and backwaters, as well as riparian vegetation. The amount of conservation area containing these land cover types that would be established, however, is small in relation to the overall size of the planning area. Moreover, the siting criteria for conservation sites include consideration of the likelihood for mosquitoes produced on a site to become a vector control or nuisance problem based on proximity to urban areas and mosquito production potential. The Conservation Plan includes other measures to minimize potential impacts from vectors, including coordinating the design and management of conservation areas with local appropriate health officials; incorporating, to the extent practicable, design, and management concepts to help reduce the likelihood that conservation areas do not produce mosquitoes in numbers that could cause public health or nuisance concerns; and providing conservation area access to mosquito abatement district officials to monitor mosquito populations. The proposed action also would result in an increase in fish and bird populations that eat insects. Given the measures included in the Conservation Plan to minimize impacts from vectors, an increase in vectors would not create disproportionate impacts to minority and low-income populations.

Impact EJ-1. Significant, short-term air quality impacts from construction activities and prescribed burns in or near agricultural areas could result in disproportionate impacts to minority and low-income populations. Construction and prescribed burn activities would result in emissions that could significantly affect air quality (i.e., the development of the largest projects and prescribed burns would produce fugitive dust emissions that could exceed an ambient 24-hour PM₁₀ standard, and air emissions from proposed conservation area establishment activities and facility construction could exceed the MDAQMD daily NO_x or PM₁₀ emission significance thresholds; refer to **Impacts AQ-2, AQ-3, and AQ-4** for additional detail). Construction activities would be temporary and would take place in agricultural or undeveloped areas that are not densely populated (urban areas would be avoided as part of the vector control management for the proposed action). Air emissions disperse, however, and it is

possible that construction and burn-related emissions could have the potential to have an impact on isolated residences and workers that are close to the affected area.

The population in the planning area is 57.2 percent minority, compared to 49.0 percent minority in the COC. Also, the population in the planning area is 21.1 percent low-income compared to 13.9 percent low-income in the COC. Based on these two comparisons and because the percentage of minority and low-income populations is meaningfully higher in the planning area than the COC, there is the potential for disproportionate impacts to minority and low-income populations from significant, short-term air emissions.

Impact EJ-2. Noise from construction and pumps that exceeded local standards could disproportionately affect minority and low-income populations. As noted above, construction activities would take place in agricultural or undeveloped areas that are not densely populated. However, in some areas, construction-related noise would have the potential to have an adverse effect on isolated residences or populations that are close to the construction area, disproportionately affecting minority populations and low-income populations (refer to **Impact NOI-1** for additional detail). Additionally, as described under **Impact NOI-2**, pumps located near noise-sensitive receptors could cause a substantial increase in ambient noise levels or exceed regulatory thresholds. Because the percentage of minority and low-income populations is meaningfully higher in the planning area than the COC, there is the potential for disproportionate impacts to minority and low-income populations from significant short-term and long-term noise.

Impact EJ-3: If agricultural land were converted to conservation areas, the loss of agricultural jobs would disproportionately affect minority and low-income populations. The potential conversion of agricultural land to conservation areas under the proposed Conservation Plan would result in the loss of agricultural jobs. It is estimated that, on average, there would be a reduction of just under 30 workers for every 1,000 acres of farmland that is taken out of agricultural use. If, as a worst-case scenario, all 8,132 acres of conservation area established under the proposed action were from conversion of actively farmed agricultural land, an average of approximately 244 agricultural jobs could be lost. Although losses of this magnitude represent extremely small shares (less than 1 percent) of the total employment in individual counties, they would represent a larger share of agricultural employment and could substantially affect individual communities. Agricultural jobs typically are held by a higher percentage of minority and low-income individuals than are represented by the county populations as a whole; moreover the population in the planning area consists of a higher percentage of minority and low-income individuals than the COC. Thus, the loss of agricultural jobs would have a disproportionate effect on minority and low-income populations.

Mitigation Measures

Implement **Mitigation Measures AQ-1** and **AQ-2**. (*Addresses Impact EJ-1*)

Implement **Mitigation Measures NOI-1** and **NOI-2**. (*Addresses Impact EJ-2*)

EJ-1 Reclamation shall work with local jurisdictions and/or growers to ensure that agricultural workers are notified as soon as possible of the potential for a loss of jobs once specific project locations have been identified. Reclamation will encourage the

1 local jurisdictions and/or growers to provide timely information and assistance to
2 agricultural workers regarding the availability of alternative employment. (*Addresses*
3 *Impact EJ-3*)

4 *Residual Impacts*

5 The implementation of **Mitigation Measure AQ-1** would reduce fugitive dust emissions from
6 project activities. The exact site sizes, locations, and construction methods are not known; thus,
7 even with mitigation, the emissions from the development of the largest projects may still
8 exceed the significance criteria considered in **Impacts AQ-2** and **AQ-4**. Therefore, residual
9 impacts of PM₁₀ emissions from the development of the largest projects would be *potentially*
10 *significant* and would have a potentially disproportionate impact on minority and low-income
11 populations as described under **Impact EJ-1**. The implementation of **Mitigation Measure AQ-2**
12 would reduce combustive emissions from prescribed burns; however, mitigated burn emissions
13 could be sufficiently substantial to contribute to an exceedance of an ambient 24-hour PM₁₀
14 standard. Therefore, residual impacts associated with the largest prescribed burns under
15 **Impact AQ-3** would be *potentially significant* and would have potentially disproportionate
16 impacts on minority populations and low-income populations as described under **Impact EJ-1**.
17 No additional mitigation measures were identified for these residual disproportionate impacts;
18 however, it is noted that once specific project locations are known, the demographics of
19 potentially affected populations may differ from those of the planning area as a whole.

20 The implementation of **Mitigation Measures NOI-1 and NOI-2** would mitigate
21 disproportionate noise impacts identified under **Impact EJ-2** since noise levels would be
22 reduced to meet regulatory standards or to avoid substantially increasing the ambient noise
23 levels.

24 The implementation of **Mitigation Measure EJ-1** would minimize potential environmental
25 justice impacts by providing advance notice of the loss of agricultural jobs to affected workers
26 and by encouraging local jurisdictions and/or growers to provide timely information and
27 assistance to agricultural workers regarding the availability of alternative employment.

28 **3.7.2.2 Alternative 2: No Action Alternative**

29 *Impacts*

30 Under the no action alternative, it is likely that conservation measures similar to those included
31 in the proposed action would be implemented because compliance with the ESA still would be
32 required for the covered actions, although some conservation could occur in the off-site
33 conservation areas (as described in section 3.7.2.4 below), as well as along the LCR. **Impacts EJ-**
34 **1, EJ-2, and EJ-3** apply to this alternative, although **Impacts EJ-1** and **EJ-2** apply only to
35 conservation in the planning area, along the LCR. Air quality and noise impacts in the off-site
36 conservation areas would not have disproportionate effects on minority or low-income
37 populations because the percentages of these populations are lower in the affected areas than in
38 the general population represented by the COC for each location. To the extent that the
39 agencies undertaking the covered actions proceed with ESA compliance through section 7
40 consultations instead of the section 10 permitting process, there may be a reduced number of
41 covered species because unlisted species would not be included. This would likely result in the

1 establishment of less conservation area than under the proposed action. Proportionately fewer
2 environmental justice impacts would occur since less agricultural land would be converted to
3 other land cover types and therefore fewer jobs would be lost (assuming a worst-case scenario
4 that all conservation areas would be established on agricultural land). The same types of
5 impacts would occur as described for the proposed action, but the overall magnitude could be
6 lessened because a smaller amount of conservation area would be established.

7 *Mitigation Measures*

8 Mitigation measures would be developed as appropriate in the course of project-specific
9 environmental reviews. If significant impacts were identified, mitigation measure similar to
10 those identified in this EIS/EIR (**Mitigation Measures AQ-1 and AQ-2, NOI-1 and NOI-2, and**
11 **EJ-1**) could be implemented. Developing and implementing such mitigation measures is
12 outside the authority of the lead agencies and is beyond the scope of this EIS/EIR.

13 *Residual Impacts*

14 As described above, the exact site sizes and locations and construction methods are not known;
15 thus, even with mitigation identified in **Mitigation Measures AQ-1 and AQ-2**, the emissions
16 from the development of the largest projects may still exceed the significance criteria considered
17 in **Impacts AQ-2 and AQ-4**. Therefore, residual impacts of PM₁₀ emissions from the
18 development of the largest projects would be *potentially significant* and would have potentially
19 disproportionate impacts on minority populations and low-income populations as described
20 under **Impact EJ-1**. The implementation of **Mitigation Measure AQ-2** would reduce
21 combustive emissions from prescribed burns; however, mitigated burn emissions could be
22 sufficiently substantial to contribute to an exceedance of an ambient 24-hour PM₁₀ standard.
23 Therefore, residual impacts associated with the largest prescribed burns under **Impact AQ-3**
24 would be *potentially significant* and would have potentially disproportionate impacts on
25 minority populations and low-income populations as described under **Impact EJ-1**. No
26 additional mitigation measures were identified for these residual disproportionate impacts;
27 however, it is noted that once specific project locations are known, the demographics of
28 potentially affected populations may differ from those of the planning area as a whole.

29 The implementation of **Mitigation Measures NOI-1 and NOI-2** would mitigate
30 disproportionate noise impacts identified under **Impact EJ-2** since noise levels would be
31 reduced to meet regulatory standards or to avoid substantially increasing the ambient noise
32 levels.

33 The implementation of **Mitigation Measure EJ-1** would minimize potential environmental
34 justice impacts by providing advance notice of the loss of agricultural jobs to affected workers
35 and by encouraging local jurisdictions and/or growers to provide timely information and
36 assistance to agricultural workers regarding the availability of alternative employment.

3.7.2.3 *Alternative 3: Listed Species Only*

Impacts

Impacts EJ-1, EJ-2, and EJ-3 apply to this alternative, although a smaller amount of conservation area would be developed than under the proposed action. Proportionately fewer environmental justice impacts would occur since less agricultural land would be converted to other land cover types and therefore fewer jobs would be lost (assuming a worst-case scenario that all conservation areas would be established on agricultural land). The same types of impacts would occur as described for the proposed action, but the overall magnitude could be lessened because a smaller amount of conservation area would be established.

Mitigation Measures

Mitigation Measures AQ-1, AQ-2, NOI-1, NOI-2, and EJ-1 apply to this alternative.

Residual Impacts

The implementation of **Mitigation Measure AQ-1** would reduce fugitive dust emissions from project activities. The exact site sizes, locations, and construction methods are not known; thus, even with mitigation, the emissions from the development of the largest projects may still exceed the significance criteria considered in **Impacts AQ-2** and **AQ-4**. Therefore, residual impacts of PM₁₀ emissions from the development of the largest projects would be *potentially significant* and would have a potentially disproportionate impact on minority and low-income populations as described under **Impact EJ-1**. The implementation of **Mitigation Measure AQ-2** would reduce combustive emissions from prescribed burns; however, mitigated burn emissions could be sufficiently substantial to contribute to an exceedance of an ambient 24-hour PM₁₀ standard. Therefore, residual impacts associated with the largest prescribed burns under **Impact AQ-3** would be *potentially significant* and would have potentially disproportionate impacts on minority populations and low-income populations as described under **Impact EJ-1**. No additional mitigation measures were identified for these residual disproportionate impacts; however, it is noted that once specific project locations are known, the demographics of potentially affected populations may differ from those of the planning area as a whole.

The implementation of **Mitigation Measures NOI-1** and **NOI-2** would mitigate disproportionate noise impacts identified under **Impact EJ-2** because noise levels would be reduced to meet regulatory standards or to avoid substantially increasing the ambient noise levels.

The implementation of **Mitigation Measure EJ-1** would minimize potential environmental justice impacts by providing advance notice of the loss of agricultural jobs to affected workers and by encouraging local jurisdictions and/or growers to provide timely information and assistance to agricultural workers regarding the availability of alternative employment.

3.7.2.4 *Alternative 4: Off-Site Conservation*

Impacts

Air quality and noise impacts in the off-site conservation areas would not have disproportionate effects on minority or low-income populations because the percentages of these populations are lower in the affected areas than in the general population represented by the COC for each location. The estimated population in the Muddy and Virgin rivers off-site location is 12.2 percent minority and 7.6 percent low-income, compared to 39.2 percent minority and 10.8 percent low-income in Clark County, the COC. The estimated population in the Bill Williams River off-site location is 12.1 percent minority and 10.8 percent low-income, compared to 18.3 percent minority and 14.3 percent low-income in La Paz and Mohave counties, the COC. The estimated population in the Lower Gila River off-site location is 43 percent minority and 18.1 percent low-income, compared to 55.6 percent minority and 19.2 percent low-income in Clark County, the COC.

Impacts EJ-1 and EJ-2 apply to this alternative but only in relation to the 360 acres of backwaters that would be established along the LCR. Thus, the potential for these impacts would be greatly reduced in comparison to the proposed action.

Impact EJ-3 applies to this alternative. As noted in section 3.2, Agricultural Resources, all of the off-site locations contain agricultural land. Since the same amount of conservation area would be established under this alternative, overall impacts would be as characterized for the proposed action. Backwaters would continue to be established in the planning area; thus, impacts associated with this component of the Conservation Plan would be identical to those of the proposed action. Other impacts associated with the loss of agricultural jobs from conservation area establishment would occur in slightly different areas than under the proposed action.

Mitigation Measures

Mitigation Measure EJ-1 applies to this alternative.

Residual Impacts

The implementation of **Mitigation Measure EJ-1** would minimize potential environmental justice impacts by providing advance notice of the loss of agricultural jobs to affected workers and by encouraging local jurisdictions and/or growers to provide timely information and assistance to agricultural workers regarding the availability of alternative employment.

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